

REMARKS

Claims 1-5, 8-10, 24-25, 29-37, 39-41, 43-46, and 48-62 are presented for examination. Claims 1, 8, 24, 31-34, 37, 43, 48, 52, 55, 57, and 58 have been amended. Claims 59-62 are new.

In the Office Action mailed November 16, 2004, the Examiner rejected claim 31 under 35 U.S.C. § 112, second paragraph, as indefinite. Applicants have amended the dependency of claim 31 to now depend from claim 24.

Claims 1-2, 4-5, 8, 24-25, 29, 32, 33, 34-35, 37, 39-41, 43-44, 46, 48-49, and 51-58 were rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,228,023 ("Zaslavsky et al."). Remaining claims 3, 9-10, 30, 36, 45, and 50 were found to be allowable over Zaslavsky et al.

Claims 1-5, 8-10, 24-25, 29-30, 32-37, 39-41, 43-46, and 48-58 were all rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,662,673 ("Kieturakis").

Applicants respectfully disagree with the bases for the rejections and request reconsideration and further examination of the claims.

Applicants thank the Examiner for the Examiner's interview conducted on December 20, 2004. In light of the discussion had with the Examiner, applicants are submitting this request for continued examination application with the claims amended as discussed during the interview. These amendments are discussed in more detail below.

Claim 1 has been amended to recite the tubular member having at a distal end of a distal tip an annular surface surrounding a terminal port. Claim 1 continues to also recite at least one barb formed on the annular surface and projecting at an angle from the annular surface of the tubular member, each at least one barb having a sharp edge configured to insert into the tissue without penetrating through the tissue as the tubular member is rotated about a longitudinal axis.

As discussed with the Examiner, the clarification that the tubular member has an annular surface at a distal end of a distal tip that surrounds a terminal port distinguishes the claimed combination from Kieturakis, which teaches a helical drill bit, and from Zaslavsky et al., which describe helical barbs that rotate with respect to a tubular sleeve.

Furthermore, Kieturakis does not teach or suggest an annular surface formed at a distal end of a distal tip of a tubular member. Applicants are submitting herewith a photocopy of several pages from Webster's New Universal Unabridged Dictionary (1996) in which "annular" is defined as "having the form of a ring." By virtue of the distal end of a distal tip of the tubular member surrounding a terminal port, the surface is annular. Such a structure is not taught or suggested by Kieturakis. In Zaslavsky et al., the sleeve 22 does define an annular surface at one end thereof, but does not teach or suggest a barb formed on the annular surface. Rather, the helical shaped prongs 32 are rotatably mounted to a shaft 26 that is rotatably mounted in the sleeve 22. In view of the foregoing, applicants respectfully submit that independent claim 1 is now allowable over the cited references.

Dependent claims 2-5 each recite additional features of the invention that distinguish over the references. For example, claim 2 recites a plurality of barbs, which was discussed with the Examiner in the interview as distinguishing over the references. Claim 3 has already been found allowable over Zaslavsky et al. and is also allowable by virtue of its dependence from claim 1 as well as by the fact that Kieturakis does not teach or suggest a plurality of barbs formed to be unidirectional with respect to one another. In view of the foregoing, applicants submit that dependent claims 2-5 are all allowable.

Claim 8 is directed to a device for grasping tissue that recites a cannula having at a distal end of a distal tip an annular surface surrounding a terminal port; and a plurality of sharp-edged barbs formed on the annular surface and projecting at an angle from the annular surface of the cannula to grasp tissue without puncturing through the tissue when the cannula is rotated about a longitudinal axis. Applicant respectfully submits that claim 8 as well as dependent claims 9 and 10 are allowable for the reasons why claims 1-5 are allowable.

Independent claim 24 is directed to a device for controlling an object that comprises a shaft having at a distal end a distal tip with an annular surface formed thereon; and at least one projection formed on the annular surface to extend from the annular surface, the at least one projection configured to hold the object without puncturing through the object when the shaft is rotated in a first direction about a longitudinal axis of the shaft. Claim 25, which depends from claim 24, recites the at least one projection configured to release the object when

the shaft is rotated in a second direction about the longitudinal axis of the shaft. Dependent claims 29-31 are directed to additional embodiments, *i.e.*, in claim 29 the projections are formed at an acute angle to the shaft, and in claim 30 the projections are formed to be unidirectional with respect to one another, and similarly in claim 31 at least a portion of the plurality of projections are formed to be unidirectional. Applicant respectfully submits that claim 24 and dependent claims 25, and 29-31 are allowable for the reasons why claims 1-5 are allowable.

Independent claim 32 is directed to a grasping device that comprises a planar surface at a distal end of a distal tip of the device and having at least one barb formed thereon to engage material without puncturing through the material when the device is rotated and to enable control over the material when the material is engaged by the at least one barb. Nowhere do Kieturakis or Zaslavsky et al. teach or suggest a planar surface formed at a distal end of a distal tip. In the accompanying copy of the Webster's New Universal Unabridged Dictionary at page 1480, "planar" is defined as "of or pertaining to a geometric plane" and in the second definition as "flat or level." Kieturakis clearly shows a helical-shaped surface having shielded helical cutting blades formed thereon. Zaslavsky et al. does not teach a barb formed on a planar surface at a distal end of a distal tip. Rather, in Zaslavsky et al. the helical prongs attach to a shaft that is rotatably mounted within a sleeve 22. Rotation of the sleeve will not rotate the shaft 26 or the helical prongs 32. Applicants respectfully submit that claim 32 is allowable over Zaslavsky et al. and Kieturakis.

Claim 33 is directed to a device for controlling an object that comprises a structure having at least one planar surface at a distal end of a distal tip; and at least one projection formed to extend from the at least one planar surface and configured to engage the object without puncturing through the object when the structure is rotated and enable control over the engaged object. Applicant respectfully submits that claim 33 is allowable for the reasons why claim 32 is allowable.

Claim 34 recites a device for grasping tissue and other material having a member with a distal tip and a face on a distal end of the distal tip, the face formed perpendicular to a longitudinal axis of the member; and at least one barb projecting at an angle from the face of the member, each at least one barb immovable relative to the face and having a sharp edge

configured to insert into the tissue and grasp the tissue without puncturing through the tissue as the member is rotated. Clearly claim 34 combines a number of distinguishing features set forth in the previous claims. In this embodiment, a face is formed on a distal end of a distal tip that is perpendicular to a longitudinal axis of the member. At least one barb projects at an angle from the face to be immovable relative to the face. Clearly the combination recited in claim 34 is allowable over both Kieturakis and Zaslavsky et al. More particularly, nowhere does Kieturakis teach or suggest the face formed perpendicular to a longitudinal axis of a member, with the face formed on a distal end of a distal tip. Rather, Kieturakis clearly teaches helical shielded blades formed to drill through a body wall. Similarly, Kieturakis does not teach a face formed on a distal end of a distal tip of its tool with at least one barb immovable relative to the face. Rather, the helical prongs 32 mounted to the shaft 26 rotate relative to the sleeve 22. Applicants respectfully submit that claim 34 is clearly allowable over the cited references.

Dependent claims 35-31 and 39-41 are directed to additional embodiments of the invention, including a plurality of barbs, the plurality of barbs formed to be unidirectional, and the annular planar nature of the face or surface formed around a port on the tubular member. Applicants respectfully submit that dependent claims 35-31 and 39-41 are allowable for the reasons discussed above with respect to claims 1-5 as well as by virtue of the fact that independent claim 34 is allowable.

Independent claims 43, 48, 52, and 55-58 all include features that clearly distinguish the claimed combinations over the cited references. Applicants respectfully submit that these claims as well as all claims depending therefrom are clearly allowable.

New claim 59 is directed to a device for grasping tissue that comprises a structure having a planar surface formed on a distal end of a distal tip of the structure and at least one non-helical barb formed on the planar surface to grasp the tissue as the structure is rotated. Here, the planar surface formed on a distal end of a distal tip and the non-helical barb formed on the planar surface distinguish this claimed combination from the cited references. Nowhere does Kieturakis teach or suggest a planar surface formed at a distal end of a distal tip and a non-helical barb formed thereon. Similarly, the helical prongs of Zaslavsky et al. attach to a shaft 26 rotatably mounted to a sleeve 22. It is clear from the present specification that the claimed barbs

are not helical and do not in any way resemble a helix. As attached pages 887-888 from the Websters Dictionary indicate, "helical" means "pertaining to or having the form of a helix; spiral," and "helix" is defined to be "the curve formed by a straight line drawn on a plane when that plan is wrapped around a cylindrical surface of any kind, esp. a right circular cylinder, as the curve of a screw." There is nothing helical about the claimed barbs of the present invention.

Claim 60 is similar to claim 59 and includes the recitation that the planar surface is formed perpendicular to a longitudinal axis of the structure. This feature in combination with a non-helical barb clearly distinguish claim 60 over Kieturakis and Zaslavsky et al.

New claim 61 is directed to a device for grasping tissue that incorporates a number of the novel features discussed above, *i.e.*, a planar face formed on a distal end of a distal tip to be perpendicular to a longitudinal axis of a structure, and at least one barb formed on the planar face to be immovable relative to the planar face to grasp the tissue as the structure is rotated. Likewise, new claim 62 is directed to a device for grasping tissue that includes a tubular member having at a distal end of a distal tip an annular planar surface surrounding a terminal port, the annular planar surface formed to be substantially perpendicular to a longitudinal axis of the tubular member and at least one non-helical barb formed on the annular planar surface to be movable relative to the annular planar surface for grasping tissue without puncturing through the tissue as the tubular member is rotated. Applicants submit that claims 61 and 62 are allowable for the reasons previously discussed.

In view of the foregoing, applicants respectfully submit that all of the claims in this application are now clearly allowable over the references cited and applied by the Examiner. In the event the Examiner finds minor informalities that can be resolved by telephone conference, applicants respectfully request a telephone interview with the Examiner to expeditiously resolve prosecution of this application. Consequently, early and favorable action allowing these claims and passing this case to issuance is respectfully solicited.

Application No. 10/039,240
Reply to Office Action dated November 16, 2004

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,

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territory, esp. by force. [1840-50; ANNEXATION + -ISM]
—*an-nex-a-tion-ist*, *n.*, *adj.*

An Nhon (än' nōn'), a city in S central Vietnam. 117,000. Formerly, Binh Dinh.

An-nie (än' ē), *n.* a female given name, form of Ann, Anna, or Anne.

An-nie Oak/ley (ōk'lē), a free ticket, as to a theater; pass. [allegedly so called because such tickets, punched to prevent reuse, resembled the playing cards used as targets by Annie Oakley]

an-ni-hi-la-ble (ə nī'ə lə bəl), *adj.* that can be annihilated. [1670-80; ANNIHILATE + -ABLE] —*an-ni-hi-la-ble-ly*, *adv.*

an-ni-hi-late (ə nī'ə lāt'), *u.t.*, *-lat-ed*, *-lat-ing*. 1. to reduce to utter ruin or nonexistence; destroy utterly. The heavy bombing almost annihilated the city. 2. to destroy the collective existence or main body of; wipe out: to annihilate an army. 3. to annul; make void: to annihilate a law. 4. to cancel the effect of; nullify. 5. to defeat completely; vanquish: Our basketball team annihilated the visiting team. [1350-1400; ME *adnichilare* (destroyed) < LL *adnichilatus* brought to nothing, annihilated (ptp. of *annihilare*) (L *an-* AN- + *nihil* nothing + *-atus* -ATE)] —*an-ni-hi-la-tive* (ə nī'ə lā'tiv, -lə), *adj.* —*an-ni-hi-la-to-ry* (ə nī'ə lā'tōrē, -tōr'ē), *adj.* —*Syn.* 1. ravage, devastate, desolate. 1. 2. smash, obliterate, demolish.

an-ni-hi-la-tion (ə nī'ə lā'shən), *n.* 1. the act or an instance of annihilating. 2. the state of being annihilated; extinction; destruction. 3. Physics. a. Also called *pair annihilation*, the process in which a particle and antiparticle unite, annihilate each other, and produce one or more photons. Cf. *positronium*. b. the conversion of rest mass into energy in the form of electromagnetic radiation. [1630-40; < F] < LL *annihilatio* (s. of *annihilatio*). See ANNIHILATE, -ION]

annihila-tion radia-tion, Physics. electromagnetic radiation produced by the coalescence and mutual annihilation of a positron and an electron, each pair forming two photons having a minimum energy of 0.5 million electron volts each. [1960-65]

an-ni-hi-la-tor (ə nī'ə lā'tor), *n.* 1. a person or thing that annihilates. 2. Math. the set of all linear functionals that map to zero all elements of a given subset of a vector space. [1690-1700; ANNIHILATE + -OR]

An-nis-ton (än'ə stan), *n.* a city in E Alabama. 29,523. *anniv.*, anniversary.

an-ni-ver-sar-y (än'ə vūr'sə rē), *n.*, *pl.* -ries, *adj.* —*n.* 1. the yearly recurrence of the date of a past event: the tenth anniversary of their marriage. 2. the celebration or commemoration of such a date. 3. See *wedding anniversary*. —*adj.* 4. returning or recurring each year, annual. 5. pertaining to an anniversary: an anniversary gift. Abbrev. *anniv.* [1200-50; ME *anniversarie* (< AF) < ML *diēsa* anniversary (day), L *anniversarius* recurring yearly, equiv. to *anni-* (comb. form of *annus* year) + *-versus* (turned, ptp. of *vertere* (vert- turn + -tus ptp. suffix) + *-arius* -ARY)]

anniv-er-sary reac-tion, a psychological reaction, as depression, occurring at a regularly fixed time and associated with the recollection of an emotionally upsetting past experience, as loss of a loved one.

an-no æ-ta-tis su-æ (än'nō i tāt'is sū'æ; Eng. an'ō i tāt'is sū'æ), *Latin*. in the year of his age; in the year of her age.

an-no Dom-i-ni (än'ō dom'ə nī', -nē', ä'nō). See A.D.

an-no He-jl-rae (än'ō hi jī'ræ, hej'ə ræ', ä'nō). See A.H. [1885-90]

an-no mun-di (än'nō mōn'dē; Eng. an'ō mun'di, -dē), *Latin*. in the year of the world.

an-no-na (ə nō'nə), *n.* any of various trees and shrubs of the genus *Annona*, native to tropical America, and grown for their edible fruits. Cf. *annonia* family. [< NL < AmerSp *anona*, *anon*, allegedly, < Arawak (Hispaniola)]

an-no-na-ceous (än'ə nā'shəs), *adj.* belonging to the plant family Annonaceae. Cf. *annonia* family. [< NL *Annonaceae* (see ANNONA, -ACEAE) + -OUS]

anno-na fam-ily, the plant family Annonaceae, characterized by tropical trees and shrubs bearing simple alternate leaves, solitary or clustered dull-colored flowers, and edible fruit, and including the cherimoya, custard apple, and sweetsop.

an-no reg-ni (än'nō reg'nē; Eng. an'ō reg'nī, -nē), *Latin*. in the year of the reign.

annot., 1. annotated. 2. annotation. 3. annotator.

an-no-tate (än'ə tāt'), *u.*, *-tat-ed*, *-tat-ing*. —*u.t.* 1. to supply with critical or explanatory notes; comment upon in notes: to annotate the works of Shakespeare. —*i.t.* 2. to make annotations or notes. [1725-35; < L *annotatus* noted down (ptp. of *annotare*), equiv. to *an-* AN- + *notatus* noted, marked; see NOTE, -ATE] —*an-ni-nota-tive*, *an-no-ta-to-ry* (än'ə lā'tōrē, -tōr'ē, ä'nō'tā tōr'ē, -tōr'ē), *adj.* —*an-no-ta-tor*, *n.*

an-no-tat-ed (än'ə tāt'id), *adj.* supplied with or containing explanatory notes, textual comments, etc.: an annotated edition of Milton's poetry. [1800-10; ANNOTATE + -ED]

an-no-ta-tion (än'ə tā'shən), *n.* 1. a critical or explanatory note or body of notes added to a text. 2. the act of annotating. 3. note (def. 1). Abbrev. *annot.* [1425-75; < L *annotatio* (s. of *annotatio*). See ANNOTATE, -ION]

an-not-i-nous (ə not'n əs, a not'-), *adj.* Bot. one year

old. [1830-40; < L *annōtinus*, equiv. to *annō* (in the year, abl. of *annus* year) + *-tinus* suffix forming adjs. from advs. of time (cf. *præstinus*); see -OUS]

an-nounce (ə nouns'), *v.*, *-nounced*, *-nounc-ing*. —*u.t.* 1. to make known publicly or officially; proclaim; give notice of to announce a special sale. 2. to state the approach or presence of: to announce guests; to announce dinner. 3. to make known to the mind or senses. 4. to serve as an announcer of: The mayor announced the program. 5. to state; declare. 6. to state in advance; declare beforehand. 7. to write, or have printed, and send a formal declaration of an event, esp. a social event, as a wedding. —*i.t.* 8. to be employed or serve as an announcer, esp. of a radio or television broadcast: She announced for the local radio station. 9. to declare one's candidacy, as for a political office (usually fol. by *for*): We are hoping that he will announce for governor. [1490-1500; < MF *anonce* < L *annūtiare*, equiv. to *an-* AN- + *nūtiare* to announce, deriv. of *nūtius* messenger] —*an-nounce-a-ble*, *adj.*

—*Syn.* 1. declare, report, promulgate. ANNOUNCE, PROCLAIM, PUBLISH mean to communicate something in a formal or public way. TO ANNOUNCE is to give out news, often of something expected in the future: to announce a lecture series. TO PROCLAIM is to make a widespread and general announcement of something of public interest: to proclaim a holiday. TO PUBLISH is to make public in an official way, now esp. by printing: to publish a book.

an-nounce-ment (ə nouns'ment), *n.* 1. public or formal notice announcing something: The announcement appeared in the newspapers. 2. the act of announcing. 3. a short message or commercial, esp. a commercial spoken on radio or television. 4. a card or piece of formal stationery containing a formal declaration of an event, as a wedding. [1790-1800; < F *anouncement*. See ANNOUNCE, -MENT]

an-nounce-er (ə nouns'sər), *n.* a person who announces, esp. one who introduces programs, presents news items, reads advertisements, and does other similar assignments over radio or television. [1605-15; 1920-25 in radio use; ANNOUNCE + -ER]

an-no ur-bis con-di-tæ (än'nō ūr'bis kōn'di tē; Eng. an'ō ūr'bis kōn'di tē), *Latin*. See A.U.C. (def. 2).

an-noy (ə noi'), *v.t.* 1. to disturb or bother (a person) in a way that displeases, troubles, or slightly irritates. 2. to molest; harm. —*u.i.* 3. to be bothersome or troublesome. —*n.* 4. Archaic. an annoyance. [1250-1300; (v.) ME *an(n)oen*, *ennoien* < AF, OF *anoier*, *anuier* to molest, harm, tire < LL *inodiare* to cause aversion, from L phrase *mihi in odio est* ... I dislike ...; cf. IN-ODIUM, ENNUI, NOISOME; (n.) ME *an(n)oi*, *ennoi* < AF, OF *an(n)ui*, etc., deriv. of the v.] —*an-noy'er*, *n.* —*Syn.* 1. harass, pester. See bother, worry. —*Ant.* 1. comfort, calm, soothe.

an-noy-ance (ə noi'əns), *n.* 1. a person or thing that annoys; nuisance: Unwanted visitors are an annoyance. 2. an act or instance of annoying. 3. the feeling of being annoyed. [1350-1400; ME < MF; see ANNOY, -ANCE]

an-noy-ing (ə noi'ing), *adj.* causing annoyance; irritatingly bothersome: annoying delays. [1325-75; ME; see ANNOY, -ING] —*an-noy-ing-ly*, *adv.* —*an-noy'-ing-ness*, *n.*

an-nu-al (än'yoo əl), *adj.* 1. of, for, or pertaining to a year; yearly: annual salary. 2. occurring or returning once a year: an annual celebration. 3. Bot. living only once a growing season, as beans or corn. 4. performed or executed during a year: the annual course of the sun. 5. Entomol. living or lasting but one season or year, as certain insects or colonies of insects. —*n.* 6. Bot. a plant living only one year or season. 7. a book, report, etc., published annually. [1350-1400; < LL *annuālis*, equiv. to L *annuus* yearly (deriv. of *annus* circuit of the sun, year) + *-ālis* -AL; r. ME *annuel* < AF < L] —*an-nu-ally*, *adv.*

an-nu-al-ize (än'yoo ə līz'), *v.*, *-ized*, *-iz-ing*. —*u.t.* 1. to calculate for or as for an entire year: Investors earned an annualized rate of seven percent paid quarterly. —*u.i.* 2. to be annualized. Also, esp. Brit., *an-nu-al-ize'*. [ANNUAL + -IZE]

an-nu-al par'al-lax. See under *parallax* (def. 2).

an-nu-al re-port, a document reporting to stockholders on management and operations and containing fiscal information, published yearly by a publicly held corporation as required by federal law.

an-nu-al ring, an annual formation of wood in plants, consisting of two concentric layers, one of springwood and one of summerwood. See *diag.* under *stem*. Also called *growth ring*, *tree ring*. [1875-80]

an-nu-al wage. See *guaranteed annual wage*.

an-nu-i-tant (ə nū'i tāt, ə nū'ōt'), *n.* a person who receives an annuity. [1710-20; ANNUITY + -ANT]

an-nu-i-t co-op-tis (än'nū'it kōip'tis; Eng. an'yoo it sep'tis), *Latin*. He (God) has favored our undertakings: a motto on the reverse of the great seal of the U.S. (adapted from Vergil's *Aeneid* IX:625).

an-nu-i-ty (ə nū'i tē, ə nū'ōt'), *n.*, *pl.* -ties. 1. a specified income payable at stated intervals for a fixed or a contingent period, often for the recipient's life, in consideration of a stipulated premium paid either in prior installment payments or in a single payment. 2. the right to receive such an income, or the duty to make such a payment or payments. [1400-50; late ME < AF *annuité*, *annuité* < ML *annuitas*, equiv. to L *annuus* yearly (deriv. of *annus* year) + *-itās* -ITY]

annu-i-ty cer-tain, *pl.* annuities certain. An annuity payable for a certain number of years regardless of any contingency.

an-nul (ə nul'), *v.t.*, *-nulled*, *-nul-ling*. 1. (esp. of laws or other established rules, usages, etc.) to make void or null; abolish; cancel; invalidate: to annul a marriage. 2. to reduce to nothing; obliterate. 3. to cancel (a regularly scheduled train, plane, social event, etc.) for one day or one time only. [1375-1425; late ME < AF *annuler* < LL *adnullare* render null (calque of Gk *exoudenēin*), equiv.

to ad- AD- + -nullāre, v. deriv. of L *nullus* no, not any] —*an-nul-la-ble*, *adj.*

—*Syn.* 1. nullify; rescind, repeal.

an-nu-lar (än'yə lār), *adj.* 1. having the form of a ring. 2. (of a carpenter's nail) having a series of concentric grooves to improve holding power. [1565-75; < L *annulāris*, equiv. to *annulus* (ring (var. of *annulus*) + *-āris* -AR)] —*an-nu-lar-i-ty*, *n.* —*an-nu-lar-ly*, *adv.*

an-nu-lar clock, a clock in the form of a vase, ball, etc., having the hours painted on a ring rotating beneath a pointer.

an-nu-lar ec-lipse, an eclipse of the sun in which a portion of its surface is visible as a ring surrounding the dark moon. Cf. *total eclipse*. [1720-30]

an-nu-lar gear, *Mach.* See *internal gear*.

an-nu-lar lig-a-ment, Anat. the ligamentous envelope surrounding a part, as the joints of the wrist or ankle or the head of the radius. [1835-45]

an-nu-late (än'yə lit, -lāt'), *adj.* 1. formed of ringlike segments, as an annelid worm. 2. having rings or ringlike bands. Also, *an-nu-lat-ed*. [1820-30; < L *annulātus*, var. of *annulātus* ringed, equiv. to *annulus* ring + *-ātus* -ATE] —*an-nu-lat-ion*, *n.*

an-nu-lit (än'yə lit), *n.* 1. Also called *bandelet*, *band-let*, *square* and *rabbit*. Archit. an encircling band, molding, or fillet, as on the shaft of a column. 2. Entomol. a ring, usually colored, around or on the surface of an organ. 3. Heraldry. a ring, represented as a voided roundel, used esp. as the cadence mark of a fifth son. [1565-75; < L *annulus* (ring (see ANNULUS) + -ET; r. earlier *anlet* < AF *anelet*, dim. of OF *anel* ring < L *annulus* ring)]

an-nul-ment (ə nul'ment), *n.* 1. the act of annulling, esp. the formal declaration that annuls a marriage. 2. Psychoanal. a mental process by which unpleasant or painful ideas are abolished from the mind. [1485-95; ANNUL + -MENT or < MF *annulement*]

an-nu-lose (än'yə lōs'), *adj.* furnished with or composed of rings: annulose animals. [1820-30; < NL *annulosus*. See ANNULUS, -OSE]

an-nu-lus (än'yə lās), *n.*, *pl.* -li (-lī'), -lus-es. 1. a ring; a ringlike part, band, or space. 2. Geom. the space between two concentric circles on a plane. 3. the veil remnant on a mushroom stalk. See *illus.* under *mushroom*. 4. a growth ring, as on the cross section of a tree trunk, that can be used to estimate age. [1555-65; < L, var. of *annulus*, equiv. to *an(n)us* ring + *-ulus* -ULE]

an-nun-ci-ate (ə nun'sē at), *v.t.*, *-at-ed*, *-at-ing*. to announce. [1350-1400; < ML *annūnciatus*, for L *annūntiatus*, ptp. of *annūntiare* to make known. See ANNOUNCE, -ATE] —*an-nun-ci-a-ble*, *adj.* —*an-nun-ci-a-tive*, *an-nun-ci-a-to-ry* (ə nun'sē tōr'ē, -tōr'ē), *adj.*

an-nun-ci-a-tion (ə nun'sē ā'shən), *n.* 1. (often cap.) the announcement by the angel Gabriel to the Virgin Mary of her conception of Christ. 2. (cap.) a representation of this in art. 3. (cap.) Also called *Lady Day*, the church festival on March 25 in memory of this. 4. an act or instance of announcing; proclamation: the announcement of a new foreign policy. [1350-1400; ME *an(n)unciatio* (u)n (< AF) < ML *annūnciatio* (s. of *annūntiatio*, for LL *annūntiatio*; see ANNUNCIATE, -ION)]

Annun-ci-a-tion illy. See *Madonna illy*. [1875-80]

an-nun-ci-a-tor (ə nun'sē ā'tor), *n.* 1. an announcer. 2. a signaling apparatus, generally used in conjunction with a buzzer, that displays a visual indication when energized by electric current. [1745-55; *annūntiātor*; see ANNUNCIATE, -TOR] —*an-nun-ci-a-to-ry* (ə nun'sē tōr'ē, -tōr'ē), *adj.*

An-nun-zio, D' (dän nōn'tsyo), Ga-bri-e-le (gä'brä-e'le). See D'Annunzio, Gabriele.

an-nus mi-ra-bilis (än'nōs mi rā'bi lis; Eng. an'es-mi-rə-bəl), *pl.* *an-ni mi-ra-biles* (än'nē mi rā'bi-les; Eng. an'i mē rā'bz, -bz), *Latin*. year of wonders; wonderful year.

An-nwn (än'ōwn), *n.* Welsh Myth. the other world; the land of fairies. Also, *An-nwn* (än'ōwn).

ano-, a combining form of *anus* or *anal*: *anorectal*.

ano-, a combining form meaning "up," "upper," "upward": *anoopia*. [< Gk, comb. form of *anō*]

ano-a (ə nō'ə), *n.* a small forest buffalo, *Bubalus (Anoa) depressicornis*, of the island of Celebes, having a brown coat and straight, sharp-tipped horns: an endangered species. Also called *dwarf buffalo*. [1840-50; < Indonesian Malay < Makassar *anuang*]

an-ode (än'ōd), *n.* 1. the electrode or terminal by which current enters an electrolytic cell, voltaic cell, battery, etc. 2. the negative terminal of a voltaic cell or battery. 3. the positive terminal, electrode, or element of an electron tube or electrolytic cell. [1825-35; < Gk *anodos* way up, equiv. to *an-* AN- + *hodos* way, road]

an-ode dark/ space, Physics. the dark region between the anode glow and the anode in a vacuum tube, occurring when the pressure is low.

an-ode glow, Physics. the luminous region between the positive column and the anode dark space in a vacuum tube, occurring when the pressure is low.

an-ode ray, Physics. See *positive ray*.

an-ode resist-ance, Electronics. (of a vacuum tube at a given level of output) the ratio of a small change in voltage of the anode to the corresponding small change in anode current. Also called *plate resistance*.

an-od-ic (än'ōdik), *adj.* pertaining to an anode or the phenomena in its vicinity. [1830-40; ANODE + -IC] —*an-od-i-cal-ly*, *an-od-ic-ly* (a nōd'ī ē), *adv.*

an-o-dize (än'ə diz'), *v.t.*, *-dized*, *-diz-ing*. Chem. to coat a metal, esp. magnesium or aluminum, with a protective film by chemical or electrolytic means. Also, esp. Brit., *an-o-dise'*. [1930-35; ANODE + -IZE] —*an-o-d-i-za-tion*, *n.*

an-o-don-tia (än'ə don'shə, -shē ə), *n.* Dentistry. congenital absence of teeth. [AN- + -ODONT + -IA]

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